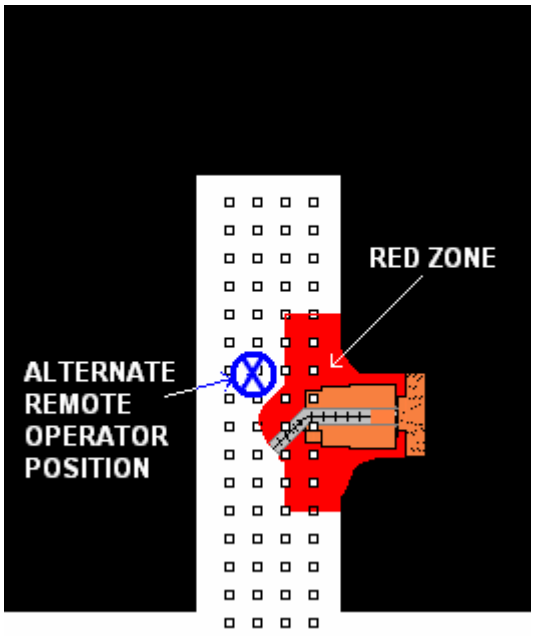
BEST PRACTICES: Turning a Crosscut with a Remote-Controlled CM

#3 - Allowing the CM operator to be positioned up the straight, on the inby side of the intersection



Depending on specific mining circumstances, an additional best practice for turning crosscuts is to allow the remote-controlled continuous miner (CM) operator the option to be positioned on the inby side of the intersection. For example, if turning a right-hand crosscut, the miner operator could position himself on the left side of the machine. This work position removes the operator from the dangers of the haulage equipment, and the possibility of going inby supported roof, while greatly improving visibility. Since these issues often become more critical as cut depth increases, operators may opt to start a crosscut from a more traditional location outby the crosscut and assume an opposite position once the machine has advanced some fixed distance.

In some instances, negative aspects of this operator position (e.g. noise, dust, and egress issues) may outweigh the positives (e.g. reduced equipment and roof fall hazards and improved visibility). However, the concept merits consideration.

A few important points to remember when implementing such a plan are as follows:

- The most common type of face ventilation is blowing line curtain on the right side of the entry with the scrubber discharge on the left side of the mining machine. Therefore, the suggested work position, with the miner operator inby the miner on the left side of the machine while turning right could then result in the miner operator in the vicinity of the scrubber discharge. Depending on dust and noise considerations in your

mine, this may or may not be a problem. In some instances, these concerns can be mitigated simply by moving slightly away from scrubber. Although exposure level may be higher in the inby location, the time per shift in this location should be relatively short; thus, average exposures necessary to remain in compliance with allowable levels may not be substantially affected. In addition, exposure time can be reduced by limiting the number of "turned" crosscuts (see Best Practice #4).

In some instances it is recognized that the ventilation plan may require the CM operator to be positioned directly adjacent to the line curtain in order to remain in fresh air at all times (for instance, this might be the case if a mine is on a reduced dust standard). Obviously, such a requirement takes precedence, and it would not be possible for the miner operator to be positioned on the inby side of the intersection.

However, discussing this situation may lead to a more ideal scenario for both dust and noise considerations as well as for a more desirable CM operator work location away from unsupported roof at the mouth of the crosscut. By turning crosscuts to the **left**, with the blowing line curtain on the right, both goals are achieved—the miner operator is in fresh air away from the scrubber, he is away from the unsupported roof at the just-created crosscut, and his visibility is much better. Mining plans that result in this scenario are encouraged.

Likewise, depending on other face ventilation scenarios, alternative locations for the scrubber discharge could be considered.

- Another possible objection to positioning the CM operator up the straight is a perception that the escapeway of the operator is blocked by the miner tailpiece. However, the CM operators who were observed working inby the intersection did not voice this objection. In fact, they stated that this was their preferred work location for both better visibility and to get away from the haulage vehicles.

- Some people have the misconception that the practice of working on the inby side of the continuous mining machine

amounts to working inby an unsupported opening, and is prohibited by the regulations. However, this is not the case. Section 75.222 (e), which discusses unsupported openings at intersections, states that "openings that create an intersection should be permanently supported … before any other work or travel in the intersection." This is intended to prevent work or travel in the intersection after the CM has been removed, and does not apply during the actual mining of the intersection.

- There may be increased difficulty in watching/handling the miner cable. In several mines where the CM operator was observed operating from the position inby the intersection there did not appear to be a problem with the cable. In several instances, shuttle car operators, the section foreman, a utility man, and the CM operator himself all combined to watch the miner cable. If however, this does not appear feasible for your mine, it is possible to alleviate this concern by relocating the miner cable connection point on the mining machine. Information obtained from several mining machinery manufactures revealed that it is possible to order a new machine with a cable connection box on both sides of the machine. In addition, it is also possible to retrofit an additional cable connection box to the off side of the mining machine. The only possible negative to this remedy is that the additional connection box adds slightly to the overall width of the machine.

- The miner operator needs to maintain his view of the machine-mounted methane monitor. Specific circumstances may dictate an additional readout or warning device such as a strobe light.